

Title (en)

CATHODE ACTIVE MATERIAL FOR SECONDARY BATTERY, AND SECONDARY BATTERY COMPRISING SAME

Title (de)

KATHODENAKTIVMATERIAL FÜR SEKUNDÄRBATTERIE SOWIE SEKUNDÄRBATTERIE DAMIT

Title (fr)

MATÉRIAU ACTIF DE CATHODE POUR ACCUMULATEUR ET ACCUMULATEUR COMPRENANT CELUI-CI

Publication

**EP 3386014 A4 20190320 (EN)**

Application

**EP 16871048 A 20161130**

Priority

- KR 20150168676 A 20151130
- KR 2016014003 W 20161130

Abstract (en)

[origin: US2018233739A1] In Equation 1 above, Esurf2 represents an extent to which a metal element is oriented toward the outermost surface of the lithium composite metal oxide particle, Esurf1 represents an extent to which the metal element is oriented toward a central portion of the lithium composite metal oxide particle, Eslab1 is energy of a slab model of the lithium composite metal oxide particle when the metal element is at the central portion of the lithium composite metal oxide particle, Eslab2 is energy of a slab model of the lithium composite metal oxide when the metal element is at the outermost surface of the lithium composite metal oxide, and Ebulk is energy of a bulk model corresponding to each of the slab models.

IPC 8 full level

**H01M 4/525** (2010.01); **C01G 53/00** (2006.01); **H01M 2/10** (2006.01); **H01M 4/131** (2010.01); **H01M 4/505** (2010.01); **H01M 10/052** (2010.01)

CPC (source: EP KR US)

**C01G 53/006** (2013.01 - EP US); **C01G 53/50** (2013.01 - EP US); **C01G 53/66** (2013.01 - EP US); **C01G 53/70** (2013.01 - EP US); **H01M 4/131** (2013.01 - KR); **H01M 4/366** (2013.01 - EP KR US); **H01M 4/48** (2013.01 - KR); **H01M 4/505** (2013.01 - KR US); **H01M 4/525** (2013.01 - EP KR US); **H01M 10/052** (2013.01 - KR); **H01M 50/20** (2021.01 - KR); **C01P 2002/52** (2013.01 - EP US); **C01P 2004/51** (2013.01 - EP US); **C01P 2004/61** (2013.01 - EP US); **C01P 2004/84** (2013.01 - EP US); **C01P 2006/11** (2013.01 - EP US); **C01P 2006/12** (2013.01 - EP US); **C01P 2006/40** (2013.01 - EP US); **H01M 10/0525** (2013.01 - EP US); **H01M 2004/021** (2013.01 - KR US); **H01M 2004/028** (2013.01 - EP KR US); **H01M 2220/10** (2013.01 - KR); **H01M 2220/20** (2013.01 - KR); **Y02E 60/10** (2013.01 - EP KR); **Y02T 10/70** (2013.01 - KR)

Citation (search report)

- [X] EP 2720305 A1 20140416 - SUMITOMO METAL MINING CO [JP]
- [X] WO 2014181891 A1 20141113 - SUMITOMO METAL MINING CO [JP]
- [X] EP 2717361 A1 20140409 - SUMITOMO METAL MINING CO [JP]
- [X] EP 2557068 A1 20130213 - SUMITOMO METAL MINING CO [JP]
- [XA] KR 101555594 B1 20151006 - ECOPRO CO LTD [KR] & EP 3024070 A1 20160525 - ECOPRO CO LTD [KR]
- [XA] KR 20140099218 A 20140811 - IUCF HYU [KR], et al & US 2015357638 A1 20151210 - SUN YANG KOOK [KR], et al
- [XA] US 2014158932 A1 20140612 - SUN YANG-KOOK [KR], et al
- See also references of WO 2017095152A1

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DOCDB simple family (publication)

**US 10763497 B2 20200901**; **US 2018233739 A1 20180816**; CN 108028373 A 20180511; CN 108028373 B 20210219; EP 3386014 A1 20181010; EP 3386014 A4 20190320; EP 3386014 B1 20240529; JP 2018534735 A 20181122; JP 6600087 B2 20191030; KR 101989398 B1 20190617; KR 20170063407 A 20170608

DOCDB simple family (application)

**US 201615751350 A 20161130**; CN 201680050913 A 20161130; EP 16871048 A 20161130; JP 2018517825 A 20161130; KR 20160161895 A 20161130